

Conference Abstract

The National Collection of Arachnida, South Africa: Making the Collection more Accessible

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Abstract

The National Collection of Arachnida (NCA) was established in 1976 at the Agricultural Research Council – Plant Health & Protection (ARC-PHP) in Pretoria, South Africa. This collection forms part of South Africa's National Assets, which the ARC manages and maintains on behalf of the Department of Agriculture, Forestry and Fisheries (DAFF) and the Department of Science and Technology (DST). The specimen holdings of the NCA contain a wealth of associated taxonomic, biological and geographical information. Currently the collection is managed by a dedicated collection manager responsible for the day-to-day running of the collection assisted by one research assistant. It is utilized for various research activities and knowledge generation in the fields of agriculture and natural resource management. The specimens are preserved using 75% alcohol and held in a double vial method in order to maximize protection of the specimens against evaporation and breakage. Hand-written catalogue books are still used to record and allocate a unique NCA – AcAT number for each specimen. This number links to all primary data recorded for the specimen. Furthermore, the data associated with the specimens are digitized according to Darwin-Core guidelines in an Structured Query Language (SQL) relational database. The database was developed by the ARC-Information Technology services.

The entire NCA presently houses approximately 77,780 catalogue entries representing more than 233,300 specimens from six Arachnida orders. The NCA is made up mainly of reference specimens, but also has a type specimen collection of newly described species.

The type collection currently contains 1,018 type specimens representing 321 species in 136 genera and 42 families. Of these, 207 specimens are holotypes. The type collection is housed separately from the reference collection and was recently moved to a newly acquired fireproof cabinet. Further planned activities include taking photos of all type specimens using a Zeiss V.16 Zoom microscope so that all type holdings are fully digitized. This will allow the implementation of an electronic loans system. Updating of the types list in the collection will facilitate availability for the wider community.

The NCA provides support for key services such as the identification of arachnid predators that have an impact on agricultural production and bio-security as well as a specimen identification and advisory service to government, farmers, industry, researchers, students and the public. These services are essential for research projects on biosystematics and relevant related fields such as conservation, decision-making, agriculture and natural resource management.

Keywords

Arachnida, Types, South Africa, spiders, agriculture, natural resources

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